UNITED STATES PATENT AND TRADEMARK OFFICE

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09/770,166	01/26/2001	Karl Erich Fankhauser	019157-020	8088

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>28 February 2007</u>.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-14 and 21-40* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-14 and 21-40* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Response to Amendment

1.   This action is in response to the request for reconsideration filed on 2/28/07.

2.   As per applicant's request claims 15-20 and 41 have been are cancelled.

3.   As per applicant request claims 1-14 and 21-40 has been considered but they are not persuasive.

4.   Claims 1-14 and 21-40 are rejected under 35 U.S.C. 102(e) as being anticipated by *Hoover et al* USPN 5,724,575.

In remarks applicant argues,

I. Identifies a location of at least one health care record stored at a corresponding one of the plurality of disparate location.

II. Information locator data.

III. Identifies a remote location, among the plurality of disparate organizations of the particular health care information pertaining to the person.

IV. Identifies at least one remote data system from among a plurality of disparate data system wherein the at least one remote data system stored one or more health care records for the particular person.

V. The location of one or more specific health care records from within the plurality of disparate organizations.

VI. Identifies a remote location of the particular health care information pertaining to the person from among the plurality of disparate providers.

In response to applicant's arguments,

I. It was noted that reference fairly suggest it identifies a location of at least one health care record stored at a corresponding one of the plurality of disparate location (figure 5, column 19-20, lines 54-67 and 1-56, Accordingly, an INSURED 57 can contain or point to a number of PERSONS 56, in a one-to-many relationship. For example, if a particular person is the nominal insured party in a health insurance plan, that person can be the responsible party for a number of other persons, such as members of his or her family, as actual instances of the subclass PERSON. This indicates that there can be multiple instances of PERSON for any one given instance of INSURED. On the other hand, there may be multiple instances of INSURED for any one given instance of PERSON, for example, if a person has insurance coverage from multiple sources, e.g. through an employer-based plan and through a privately purchased insurance plan. Therefore, the double arrow notation between PERSON 56 and INSURED 57 in FIG. 5 indicates the presence of ode or more junction records or tables (not shown) that represents or corresponds to a "many-to-many" relationship between certain classes or subclasses of objects. Typically, a many-to-many relationship is implemented in the present invention as one or more junction records, comprising one or more tables that relate one object, such as a PERSON, to multiple instances of related objects, such as INSUREDs, and conversely that relate the other object, INSURED, to multiple instances of related PERSON objects. Note in FIG. 5 that there is a one-to-many relationship between a PERSON object 56 and a VISIT object 54, indicating that any given person can have a number of visits, perhaps by the same health care supplier or from different health care suppliers.

Consider next the abstract base class SERVICE PROVIDER 50, which has a many-to-many

relationship to VISITS 54. Thus, any given service provider many need to track a number of

visits. Examples or subclasses of service providers include a HOSPITAL class 51,

PHYSICIAN 52, and physician's PRACTICE 53. These examples relate also to the discussion

of FIG. 4. Note the relationship between a physician's PRACTICE class 53 and PHYSICIAN

52, since a physician may be a member of a group of physicians forming a practice, and may

have a particular primary practice reflected in a PRACTICE.sub.-- PHYSICIAN 59 object

instance. It should be noted in conjunction with FIG. 5 that the relationship between various

computer systems that typically create specific instances of objects is illustrated. For example,

and referring between FIG. 1 and FIG. 5, the client site 3 12d corresponds to a hospital, where

the hospital is shown as an object 51. Likewise, the insurance company or carrier 60

corresponds to the user computer site 1 12a, and the PPO/HMO/TPA 61 corresponds to the user

computer site 4 12c. Similarly, the employer 63 in FIG. 5 corresponds to the user computer site

2, shown at 12b in FIG. 1. Note in FIG. 5 the preadmission certification object, identified at 67.

In the preferred embodiment, a preadmission certification object instance is an associative

entity-type object, utilized to signify that a particular person is certified to receive a particular

procedure by a particular physician. These objects, and the relationship there between, are

discussed in greater detail below in connection with the Patient Information Application

software. For the present, it is sufficient to note that the preadmission certification object 67

has lines directed to, and therefore draws data from, a person object 56, a physician object 52,

and a UR (utilization review) firm 65. In a typical health care information system, for particular

sets of benefits a particular UR firm 65 may be designated as qualified to determine the appropriateness of treatments for a given diagnosis. The object UR firm 65 is therefore related to a BENEFITS object 68, which collects and stores health care benefit information derived from, for example, a person's insurance carrier 60, employer 63, or a group plan 69. Therefore, examiner interprets that reference teaches that data is stored at different locations and accessed by physician, hospital and insurance. Thus, limitations are met by the reference.

II. It was also noted that reference fairly teaches Information locator data (figure 7, column 24, lines 35-65, as best illustrated in FIG. 7, each map table 120 in the object broker 20 comprises a linear table stored in the memory of the object broker computer, arranged as a plurality of rows of data items, each item arranged in columns of like types of data items. In the preferred embodiment, the data items include he object identifiers or indicia (also called object ID or OBJID), TABLE.sub.-- NAME, STATUS, and LOCATION. There is a record (a row) comprising a plurality of items associated with each object identifier for which data is stored anywhere in the system, globally. There can be a plurality of entries for a given object identifier. There will be at least one entry for each instance of an object created in the system; for each instance of an object created by any of the remote databases, there will be at least one entry in the map table 120. Thus, the map table 120 is generally consulted, and is indexed, by object identifier and location. The TABLE.sub.-- NAME field stores information indicating which object attribute table (OAT) at the location indicated in the LOCATION field contains information relating to the identified object. For example, for the object identifier 0011 at location RDB1, there is information stored in the object attribute table OAT1. This indicates

that for the particular object in question, 0011, selected attributes pertaining to that particular

object are stored in object attribute table 1 at remote database 1). Therefore, examiner interprets

that information data locator is been identified and data has been located regardless of the

location by mapping the table. Therefore, limitations are met by the reference.

III. It was noted that reference also teaches identifies a remote location, among the plurality of

disparate organizations of the particular health care information pertaining to the person (figures

7-8, column 25-26, lines 59-67 and 1-32, thus, it will be noted that the EMPLOYEE.sub.-- IDX

junction table includes object identifiers for employee, employer, and person. For example,

given an object identifier for a particular employee (e.g., employee OBJID 1456 in the

EMPLOYEE.sub.-- IDX table 130c), one can determine and retrieve associated employer

information such as employer name and address from the EMPLOYER.sub.-- IDX table 130b

since the particular employee OBJID is associated with an employer OBJID 7351, Acme

Metals, 456 Peach St. Likewise, one can determine and retrieve associated personal

demographic information associated with the employee such as phone, birth date, or social

security number from the PERSON.sub.-- IDX table 130a since the particular employee

OBJID is associated with a person OBJID 0012, John Doe. As will be known to those skilled in

the art, the use of index tables allows for rapid searches since the tables are presorted in

alphabetical or numerical order and can be rapidly searched. In the example given of the

PERSON.sub.-- IDX table, predetermined search terms such as first.sub.-- name, last.sub.--

name, phone, or SSN are provided in sorted columns to quickly find the object identifier for a

particular person. For, example, if a person's social security number (SSN) is known, then,

usually this number uniquely identifies a given person, at least a U.S. citizen. If data exists for

this particular social security number, then the entry into the table (or a search in the table) by

social security number will yield an object identifier (OBJID) associated with that particular

person. It will be understood that a person's name (first name and last name) is generally not

sufficient to identify a person uniquely. However, it is substantially more likely that a person's

full name in conjunction with their date of birth will uniquely identify an individual, since it is

statistically unlikely that a person having the same full name will have the same date of birth.

Accordingly, an entry into the table by name and birthday (that is, a search based on name and

birthday in the conjunctive) will yield an object identifier for that person, if data in the system

exists for that person. In the preferred embodiment, the PERSON.sub.-- IDX table has as

primary keys name (first and last), social security number, and birth date). Therefore, examiner

believe that particulars person's data regardless of the location is identified, retrieved and

processed by the care providers since social security number, record number and other object

identifier is used. Thus, limitations are met by the reference.

IV. It was also noted that reference teaches identifies at least one remote data system from

among a plurality of disparate data system wherein the at least one remote data system stored

one or more health care records for the particular person (figures 1, 5, 10-17, column 41, lines

6-36, Because of the heterogeneous environment of the user computers in the health care

industry used as the example for the invention, it will usually be the case that record fields in a

customer's database 26 will not match the record fields in the remote database 28. For example,

one computer system may designate a person's name with three separate fields, first.sub.--

name, middie.sub.-- name, and last.sub.-- name, another computer system may use only

two fields, first.sub.-- name and last.sub.-- name, while a third computer system may only use

one field, name, using spaces or other delimiters to separate different names. Therefore, in

order to process transaction requests from the user computer sites 12, the customer specific

applications program interface 32 must first map the particular record fields in the customer's

heterogeneous data model into a uniform set of fields in a homogeneous data model at the

remote database. FIG. 17 illustrates several examples of customer specific field names

and their mapping to corresponding field names in an exemplary homogeneous data model. For

example, consider that in a user's computer (customer database 26) a patient's name is stored in

a single field PAT1-NAME, but is mapped into three fields, person.first.sub.-- name,

person.middle.sub.-- name, and person.last.sub.-- name, in the associated remote database 28.

The nomenclature utilized hem is <class.sub.-- name>.<attribute>, where

<class.sub.-- name> is an object in the object model created for the system, e.g. a person,

and <attribute> is one of the data items or attributes associated with the particular type of

object, e.g. a person's first name. Similarly, the date of admission will be mapped from PAT1-

ADMIT-DATE in the customer's database 26 into visit.admit.sub.-- date in the remote database

28. Therefore, reference teaches identifying at least one remote data system from among a

plurality of disparate data system wherein the at least one remote data system stored one or

more health care records for the particular person and allows access from customer database

remotely. Thus, limitations are met by the reference.

V. Reference also teaches the location of one or more specific health care records from within

the plurality of disparate organizations (figure 5, column 19-20, lines 54-67 and 1-56,

Accordingly, an INSURED 57 can contain or point to a number of PERSONS 56, in a one-to-

many relationship. For example, if a particular person is the nominal insured party in a health

insurance plan, that person can be the responsible party for a number of other persons, such as

members of his or her family, as actual instances of the subclass PERSON. This indicates that

there can be multiple instances of PERSON for any one given instance of INSURED. On

the other hand, there may be multiple instances of INSURED for any one given instance of

PERSON, for example, if a person has insurance coverage from multiple sources, e.g. through

an employer-based plan and through a privately purchased insurance plan. Therefore, the

double arrow notation between PERSON 56 and INSURED 57 in FIG. 5 indicates the presence

of ode or more junction records or tables (not shown) that represents or corresponds to a "many-

to-many" relationship between certain classes or subclasses of objects. Typically, a many-to-

many relationship is implemented in the present invention as one or more junction records,

comprising one or more tables that relate one object, such as a PERSON, to multiple instances

of related objects, such as INSUREDs, and conversely that relate the other object, INSURED,

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health care suppliers. Consider next the abstract base class SERVICE PROVIDER 50, which

has a many-to-many relationship to VISITS 54. Thus, any given service provider many

need to track a number of visits. Examples or subclasses of service providers include a

HOSPITAL class 51, PHYSICIAN 52, and physician's PRACTICE 53. These examples relate

also to the discussion of FIG. 4. Note the relationship between a physician's PRACTICE class

53 and PHYSICIAN 52, since a physician may be a member of a group of physicians forming a

practice, and may have a particular primary practice reflected in a PRACTICE.sub.--

PHYSICIAN 59 object instance. It should be noted in conjunction with FIG. 5 that the

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is illustrated. For example, and referring between FIG. 1 and FIG. 5, the client site 3 12d

corresponds to a hospital, where the hospital is shown as an object 51. Likewise, the insurance

company or carrier 60 corresponds to the user computer site 1 12a, and the PPO/HMO/TPA 61

corresponds to the user computer site 4 12c. Similarly, the employer 63 in FIG. 5 corresponds

to the user computer site 2, shown at 12b in FIG. 1. Note in FIG. 5 the preadmission

certification object, identified at 67. In the preferred embodiment, a preadmission certification

object instance is an associative entity-type object, utilized to signify that a particular person is

certified to receive a particular procedure by a particular physician. These objects, and the

relationship there between, are discussed in greater detail below in connection with the Patient

Information Application software. For the present, it is sufficient to note that the preadmission

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determine the appropriateness of treatments for a given diagnosis. The object UR firm 65 is

therefore related to a BENEFITS object 68, which collects and stores health care benefit

information derived from, for example, a person's insurance carrier 60, employer 63, or a group

plan 69. Therefore, examiner interprets that reference teaches that data is stored at different

organization and data is retrieved by physician, hospital and other care providers. Therefore,

limitations are met by the reference.

VI. It was also noted that reference fairly teaches in identifying a remote location of the

particular health care information pertaining to the person from among the plurality of disparate

providers (figures 18, column 41-42, lines 60-67 and lines 1-41, after determining which fields

in the customer's heterogeneous data model are mapped into corresponding fields in a

homogenous model at the remote databases, a system is provided for ascertaining which order

to enter the customer's data records into the system. This system comprises use of a

predetermined structure file, such as is shown at 300 in FIGS. 18A-18C, to communicate the

data from the customer database 26 to the remote database 28, and a state table or "put"

specification, such as is shown at 400 in FIGS. 19A and 19B, to process the structure file 300 to

effect the importation of the data. As previously mentioned, there are often certain dependencies

between data items which cause selected primary information to be processed prior to other

related or dependent information. The files used to communicate requests and responses

between the user computer's internal application system(s), typically running at the customer

database 26, and the remote databases 28 distributed database system are, in the preferred

embodiment, RM/COBOL files. The request file and the response file are indexed files,

possibly with multiple indexes. As previously mentioned, a request record comprises the

concatenation of a header and a plurality of data records or items. The header fields are

used to identify the physical location, the server (computer), and the specific application source

of the request. The response will be a multiple record set, in the form of a structure file 300.

For example, the response record for a patient information transaction, depending on the

transaction request type, comprises the following information in a predetermined format within

a structure file 300: patient demographics and employment information, contact(s)

demographics and employment information, guarantor(s) demographics and employment

information, insurance carrier demographics information, group plan(s), benefit details, etc.

FIGS. 18A-18C illustrate an exemplary structure file 300 that is communicated via the customer

specific application program interface 32 between a customer database 26 and a remote

database 28 so as to import data into the remote database. The diagram illustrates the physical

layout of fields within the record, and more importantly it illustrates the relationship between

the fields in the record as derived from the customer database, and the columns (attributes)

within tables (objects) in the exemplary health-care related object model described in

connection with the preferred embodiment. The structure file 300 also provides information

regarding the order in which a customer's data records are added into the system. Therefore,

remote location of the particular health care information pertaining to the person from among

the plurality of disparate providers is been identified and data available to use. Thus, limitations

are met by the reference.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Anil Khatri whose telephone number is 571-272-3725. The

examiner can normally be reached on M-F 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ANIL KHATRI
PRIMARY EXAMINER